St. Gallen, Schuppis new construction









SHORT DESCRIPTION

To expand the premises of K+D AG on the Schuppis industrial estate in St. Gallen, an extension featuring a four-level underground parking garage and five above-ground floors was built.

THE PROJECT

With floor space measuring 55 x 30 m, the extension directly adjoins the existing production building Schuppis 8, which has only one basement level and shallow foundations. The challenging conditions imposed by the surrounding area, such as the heterogeneous building plot (soft, loose moraine on top, heavily pre-stressed and cemented moraine underneath), the groundwater, the considerable excavation pit depth of 11.5 m, the surrounding buildings and the limited space available for installation and logistics activities, required innovative, comprehensive solutions. The Foundation Engineering business unit of Implenia constructed the entire excavation pit using overlapping bored piles installed in a collar formation, including the underlying concrete structure of the parking garage up to ground level.

SERVICES IN DETAIL

- Excavation of the foundation pit: 21,800 m^3

- Bored pile wall: 212 bored piles DN 1,000, L = 23.5 m
- Foundations: 39 bored piles DN 1,000/1,200, L = 9-11 m, 22 pcs auxiliary piles DN 1,000, L = 8 m, with HEB 400 steel profiles
- Filtering wells: 7 pcs DN 1,000/400
- Roof constructed using top-down method: 3,500m^3 concrete construction

CHALLENGES

Heterogeneous building plot, high groundwater level, surrounding buildings, limited space.

FACTS

Location	Schuppisstrasse 10, St. Gallen , Switzerland
Status	completed
Construction volume (value of our services)	4.5 M CHF
Start of construction	February 2015
Completion	December 2015
Building owner	K+D Immo AG
Contracting entity	K+D Immo AG
Project management	Kellenberger Ingenieur AG
Project designer	Borgogno Eggenberger + Partner AG
Construction management	Borgogno Eggenberger + Partner AG
Construction management	Borgogno Eggenberger + Partner AG

SERVICES

Special Foundations